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ABSTRACT

A study investigated whether invented spelling is superior to the traditional method of teaching spelling and whether invented spelling strengthened the reading and writing connection. Subjects were students in two second-grade classes at two different elementary schools in a school district in south-central Pennsylvania. Both teachers used the spelling textbook program provided by the district. In one classroom, the teacher accepted students' attempts at correct spelling in their writing, homework, and classwork. In the other classroom, the teacher accepted only correct spelling and urged that students use dictionaries, classmates, parents, the teacher or other sources to validate correct spelling. Writing samples (collected in September and again in March) were evaluated using the Blackburn Scale of Writing Development (R. Maraschiello, 1994). Results indicated no statistically significant difference between the two instructional spelling methods. However, students in the invented spelling class wrote significantly more words than students in the direct instruction class. (Contains 23 references. Appendixes present letters to parents and school administrators, a developmental spelling stages chart, the Blackburn Scale of Writing Development, and statistical analysis of data and graphs.) (RS)

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ED 406 645

The Effectiveness of Encouraging Invented Spelling

A Research Study

Presented to

The Members of the Reading Committee

Shippensburg University

In Lieu of the Comprehensive Examination

to Complete the Requirements

for the M. Ed. in Reading Degree

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CHAPTER 1

THE PROBLEM

INTRODUCTION

One of the goals of an education is teaching the ability to spell. To the general public, a document fraught with misspellings appears unfinished, uninformed or the work of someone who is incompetent. Teachers while sensitive to the needs of children do not want them to appear in a negative manner. This explains the dichotomy that exists between wanting to teach holistically valuing children's approximations while also trying to meet public expectations of what finished work should look like correct in a traditional manner(Gill, 1992). Thus to be truly literate, American society expects that educated people can spell. Templeton (1992, p. 454) enumerated: ". . . Americans have perceived spelling to be the very soul and fiber of education, and at times, intelligence, the measure of our school's successes".

IMPORTANCE OF STUDY

Falling under scrutiny in this area of course is the teaching of spelling. In implementing whole language philosophy, teachers have been taught to value students' approximations by whole language experts such as Routman (1991). Spelling today is thought to be developmental in that there are stages which children naturally go through in their quest for proper spelling conventions.

With the advent of the popularity of the whole language movement came new

ideas about the way children acquire language conventions. Literature was read and discussed in whole-group settings as opposed to the previous small ability-based basal reading groups. Children were no longer "tracked" into groups such as eagles and blackbirds. The experience chart with the teacher as facilitator leading the students in a whole-group discussion replaced the basal workbook exercises, reading groups and seatwork. Teachers began to teach age-old subjects such as phonics, spelling, parts of speech, punctuation, grammar and the like on an as-needed basis in short mini-lessons and not as separate subjects if they taught these skills at all.

Due to all these changes, many teachers are unsure of how spelling fits into to all of this and are confused about how to teach a precise skill such as spelling in an approximation mode. This is similar to teaching math problems with more than one correct answer. On this subject, Wilde has postulated (cited in Bartch, 1992, p. 405) that the new spelling curriculum should encompass the following:

1. A spelling program should produce competent, independent spellers. We should focus on how students spell words. Children should be encouraged to write throughout the day for a variety of purposes. Children come with a wide, mature knowledge base that we need to expand through reading and writing. Exposure to words should come through reading. As teachers, we need to provide encouragement and opportunity for growth.

2. Learning to spell is the acquisition of a complex schematic system that is developed through use. Spelling is a developmental process similar to learning to talk. Babies and young children babble and scribble in the early years, and adults offer support and encouragement and praise the children for their accomplishments. Spelling should be learned in the same way.

3. The pace and direction of spelling can be determined by the learner. Children should be working on their own level at the same time as moving forward.

The goal of this study is to determine if these methods are indeed superior to the traditional method of teaching spelling. Does accepting students' approximations and invented spellings help or hinder language acquisition? Does invented spelling strengthen the reading and writing connection? These are some of the questions this study will attempt to answer in light of current research.

STATEMENT OF THE PROBLEM

The basic problem today is how to facilitate the necessary spelling instruction in keeping with society's expectations while following the guidelines of holistic instruction. Many teachers weigh the advantages of the traditional mode of direct spelling instruction against the newer whole language methods. However, these "new" methods are largely untested as is much of whole language theory.

The traditional method stressed mainly memorization of the spelling of words. Students were required to memorize lists of weekly spelling words. Usually these lists were written on the chalkboard on Monday. Monday's homework may have been to write each word ten times and use it in a sentence. A pretest may have been given on Tuesday to determine the level of memorization needed by individual students. Spelling workbook pages were also assigned for reinforcement. Spelling games were played. And on Friday afternoon came the spelling test. Tests were corrected by the teacher with red marks which indicated the students' deficiencies. The following week the process stared all over again.

The holistic method of teaching spelling was based on the theory that children learn how to spell in stages. The teacher then individualized spelling instruction based on a student's work. On learning from invented spellings, Gill (1992, p. 445)theorized that:

> Children's spelling errors can be seen as affirmations of their centralized word knowledge used for both word recognition and spelling. An understanding of their stage-like progression toward conventional spelling can give teachers invaluable insights into not only what children understand but also what they are going to understand next and how it is that they come to the new awareness.

The fundamental problem which has occurred from all these changes is the basic argument which pits the old basal approach of "skills and drills" against the new whole language approach. Whole language dictated that skills should not be taught in isolation but should be taught in context of the current learning situation, as dictated by the demands of the current literature, under scrutiny in the classroom.

RESEARCH HYPOTHESIS

There will be a statistically significant increase in the writing abilities of students who are taught to use invented spelling in their work as opposed to students whose spelling is only accepted if it is correct.

NULL HYPOTHESIS

There will be no significant difference in the writing abilities of students who are taught to use invented spelling in their work as opposed to students whose spelling is only accepted if it is correct.

DEFINITION OF TERMS

Invented Spelling: A method of teaching spelling that recognizes developmental stages in the spelling abilities of young children and values students' attempts or approximations at correct spelling. A teacher using this approach would act as a facilitator who would guide students to the acquisition of spelling knowledge after assessing their individual level of understanding utilizing word sorts and other whole language based strategies.

Traditional Approach: The method of spelling instruction that emphasizes memorization of word spellings. This method is based on teacher activities, worksheets and homework designed to help students memorize the words for the weekly lessons. A teacher using this method of spelling instruction would accept only correct spellings of words. The word is either spelled correctly or it is not, right or wrong with no approximations.

Whole Language: Stahl and Miller (cited in Uhry & Sheperd, 1993, p. 219) described whole language as a "philosophy for teaching reading using meaningful, natural language from literature and from children's own stories. Skills are not taught directly. Children deduce phonics patterns from exposure to print. Children are encouraged to write using invented spellings and then read their own work. Conventional spelling will be learned as children encounter words in the literature they are reading (Uhry & Sheperd, 1993).

PROPOSED ACTION PLAN

PERMISSION TO CONDUCT THE TYPE OF STUDY

First, a letter was sent to the superintendent of a south-central Pennsylvania school district (see Appendix A) describing the scope of the proposed study comparing the advantages of utilizing invented spelling and the traditional mode of spelling instruction. After obtaining permission to carry out the study, two principals of two elementary schools were contacted (see Appendix B) based on the availability of a traditional classroom compared to a whole language classroom utilizing invented spelling. Upon obtaining the permission of the two second grade classroom teachers, letters were sent home to the parents of the students (see Appendix C) to obtain their permission for the participation of their children.

SAMPLE SIZE AND SAMPLING TECHNIQUE

The study was limited to two classes of students at two different elementary schools in a school district in south-central Pennsylvania. Two schools were used to prevent contamination of the study. The second grade classes utilized were matched as closely as possible with regard to number of male and female students, abilities, ethnic diversity and motivation.

DESIGN OF THE STUDY

Two teachers with the same experience and qualifications were used. Both teachers utilized the spelling textbook program provided by the district. In one classroom, the teacher accepted students' attempts at correct spelling in their writing, homework and classwork. In the other classroom, the teacher accepted only correct spelling and urged that students utilize dictionaries, classmates, parents, the teacher or other sources to validate correct spellings.

In September, both teachers obtained writing samples from their students. These samples were analyzed and ranked according to writing level by district reading specialists who were trained by Dr. Maraschiello (developer of the Blackburn Scale) using the Blackburn Scale of Writing Development that is currently being used by The Philadelphia School District (Maraschiello, Zorzi, Breslouer, Hershberger, Dowburd & Harmon - see Appendix E). These evaluators did not know the basis of the study and would evaluate mixed sets of samples consisting of some from each elementary school second grade classroom in the study. The researcher collected the leveled samples and kept track of the scores.

In March, the same process as used in September was repeated. Writing samples were collected after the teachers utilized their different approaches to teaching spelling. The independent evaluators were given a different set of samples to evaluate than they had in September. In this way, the researcher eliminated the chances for bias if an evaluator would have rated the same student's sample twice.

MEASURING INSTRUMENTS

The method of assessment was a pre and post writing sample with assignment of writing level using the scale of writing development created by the Blackburn Elementary School. The Blackburn Scale consists of eleven levels of writing proficiency. The holistic scoring guide as well as samples of writing at the various levels are included in Appendix F. A t test will be used to compare the difference between the test scores obtained in September and March.

ANALYSIS OF DATA

The information for the *t* test for independent samples(Gay, 1987, p. 421) follows:

The *t* Test for Independent Samples

117. The formula is:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{SS_1 + SS_2}{n_1 + n_2 - 2}\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

118. The formula for the degrees of freedom is

$$n_1 + n_2 - 2$$

119. If your *t* value is equal to or greater than the *t* table value, you reject the null hypothesis; the means are significantly different at a selected α level.

The researcher will use the probability level of 0.05 and 30 degrees of freedom (32- 1) on the distribution of t table to determine the critical value of t. The critical value will then be compared to the calculated value. If the calculated value of t is of equal or greater value to 2.04 (the critical value of t) , then the researcher will reject the null hypothesis. Any calculated score below the critical value of t indicates that the researcher will accept the null hypothesis.

CHAPTER 2

HISTORICAL PERSPECTIVE ON SPELLING

A REVIEW OF THE LITERATURE

THE TRADITIONAL APPROACH - DIRECT INSTRUCTION

The traditional spelling curriculum emphasized that students learn to spell sets of words by memorization. Pupils then soon forgot the memorized words. This system emphasized the use-it or lose-it philosophy many have encountered in the area of foreign languages. As in the case of the foreign dialect, the word knowledge was soon lost if not used daily.

Educational psychologists have long favored a system of spelling instruction that relates knowledge instead of teaching skills in isolation. It simply made more sense to emphasize the spelling of words as they were used in students' writing. Words are more meaningful when students encounter them in subjects and experiences being taught than when asked to memorize lists of less meaningful words. Ediger (1994) proposed that correct spelling of words needs to be integrated into the daily literacy activities of students as the need arises and not taught as an isolated list of words to memorize for no meaningful purpose. This is the basic idea of the whole language approach to spelling as proposed by Routman (1991) and others.

SPELLING - THE WHOLE LANGUAGE APPROACH

INVENTED SPELLING

On encouraging invented spelling, Routman (1991, p. 224) explained:

> The primary purpose of invented spelling is to free children to write. In a class of twenty-five or more students, the child is able to continue writing and does not have to stop and wait for the teacher. If the child asks me how to spell a word, I say, 'Do the best you can' or 'What sounds do you hear?' or 'How can you help yourself?' When he asks, 'Is it right?' I might say, 'That's just fine for now.' If the children are continuing to ask the teacher to spell words, they are getting the message that the teacher will spell for them.

Shanahan (cited in Richgels, 1995, p. 99) recommended invented spelling to teachers as a method of providing students with a way "to discover spelling principles as they attempt to make their spellings look and sound more like the words they read". Students then continue to grow in their spelling knowledge and success.

Gettinger (1993, p. 282) explained:

> From a behavior-analytic perspective, spelling success is attributed to frequent exposure to language stimuli such as engagement in repeated reading and writing activities that are developmentally appropriate. Exposure to correctly spelled words may occasion a child's correct spelling of the words in his or her spontaneous writing. Through differential reinforcement of only correct spelling, inaccurate spellings eventually are replaced with accurate ones.

Children tend to invent spellings in much the same way that they invent words in oral language development. They understand the relationship between speech and print and that letters stand for sounds but think that writing consists of recording these sounds

on paper precisely as they have heard them. Unfortunately words many times are not written as they are heard. As a child's interaction with and exposure to print continues invented spellings yield to more conventional forms (Schwartz, 1988).

TWO METHODS BASED ON DIFFERENT THEORIES

Direct instruction in spelling is based on a two-stage model that theorizes that children progress from being unable to spell to being able to spell correctly (Gettinger, 1993). According to Doyle (cited in Gettinger, 1993, p. 281) "The act of spelling is conceptualized as a procedural task in which students are required to focus on, discriminate, and consistently reproduce letters of words in proper order ". From this point of view, spelling success has been attributed primarily to the use of highly structured teacher-controlled environmental contingencies designed to strengthen the accurate production of written words (Gettinger, 1993).

A second divergent view emphasizes the theory that spelling expertise develops in stages and naturally begins with the child's inventive spelling. Gentry and Gillet (1993, p. 26-35) named five stages of spelling proficiency. (See listing on the next page.) These stages all make perfect sense according to Routman (1993, p. 37) regarding invented spelling she reflected:

> Invented spelling recognizes that learning to spell, like learning to talk, is developmental. Children are not expected to get it right immediately. Promotion of invented spelling recognizes and respects that learners need lots of time and practice to take risks, make mistakes, and do plenty of reading and writing.

1. Precommunicative Stage Children demonstrate some knowledge of the alphabet by writing letters to form a message. However, there is not a knowledge of letter-sound correlation. Frequently, numbers or other symbols are utilized in the words.

2. Semiphonetic Stage The speller in the semiphonetic stage of development has made great strides in the understanding of English orthography. This type of speller demonstrates the knowledge that letters make sounds, and these sounds make words. The semiphonetic speller displays awareness of the left-to-right orientation of the English language, but may not segment the words. They usually use only one or two letters to make words.

3. Phonetic Stage Phonetic spellers realize that words can be spelled phonetically; therefore, they write what they hear. While some of their words may not look like conventional English, they are written systematically. Children at this stage of development are beginning to show mastery of letter formation and word segmentation.

4. Transitional Stage The critical component of transitional spelling is the awareness that written language is separate from spoken language. This type of speller realizes that words need to look correct, not just sound correct. Words begin to have a look of literacy as transitional spellers move towards standard English orthography.

5. Conventional Stage Conventional spellers demonstrate their comprehension of the English orthographic system and its rules in their spelling. Words are frequently spelled accurately. Instruction at this level attempts to refine orthographic knowledge and to assist mastery of uncommon patterns and irregularly spelled words.

Researchers since the 1970's have indicated that spelling is a process of development of orthographic knowledge and that a student's knowledge of spelling conventions can be determined by examining their invented spellings. This developmental view of spelling based on a continuum of increasingly complex inferences has also been compared to a child's development of oral language. The idea that this developmental approach to a child's literacy acquisition may be a linguistic universal is supported by spelling research in other languages (Gill and Scharer, 1993).

THE IMPORTANCE OF INVENTED SPELLING IN WRITING

The importance of children developmentally utilizing invented spelling in their writing has been well documented. Uhry and Shepard (1993, p. 219) stated that "children are encouraged to write, and then read their own work . . . . Spelling is invented; children are encouraged to listen carefully to spoken words, to segment . . . and then spell, representing these phonemes with letters." The antiquated authoritarian approach to education has given way to a more humane system. Students need to be told more than once how to do something regardless of what our teachers, mothers or grandmothers may have thought! Whole language has taught us, or reminded us, that students need to be afforded many opportunities at success in order for them to grow and learn. Valuing their approximations in the area of spelling is just one way in which adults recognize their

efforts and encourage them to work even harder. Children need to use their approximations in order to learn correct spelling conventions during the transitional stage of spelling development. Students are able to gain the necessary practice and use their invented spellings by writing.

Writing is the next important component in the process of learning how to spell. Students should spend some time every day writing since this helps them to become better spellers (Caulkins, 1986). Children should be encouraged to use invented spelling in their stories because they need to explore and learn spelling patterns on their own terms. Children's approximations need not be altered in individual stories; however, if the writing is a shared experience, then correctness can be monitored by the teacher. Children quickly learn from each other and realize the need for increased responsibility for the finished manuscript when the writing is more public. Children can usually pick out misspelled words and seek out the good spellers for advice during the editing stage. This is comforting to the concerned teacher of administrator who has read about the importance of invented spelling but is worried about the public display of incorrect spelling (Cunningham and Allington, 1994).

Children learn how to spell by spelling both conventionally and nonconventionally as in the case of invented spelling. They also, as is the case with many other skills, need a lot of time to practice their approximations. They should not be expected to perform

perfectly from the start utilizing the skill of spelling anymore than be expected to play a musical instrument perfectly from the first lesson. Both skills require a lot of practice. This practice has been recognized to be important by several authors. According to Crafton (1994, p. 185) invented spelling is important:

> BECAUSE it represents the natural exploration that is necessary for learning to occur;
>
> BECAUSE if encourages independence and frees writers to get on with the expression of precious meanings;
>
> BECAUSE it puts control and responsibility for the writing process in the writer's hands where it belongs.

INVENTED SPELLING - THE READING CONNECTION

Richgels (cited in Crafton, 1994, p.183) has characterized invented spelling by his explanations of what it is. He postulated that "invented spelling is writing, invented spelling is real spelling, invented spelling is phonics in use and invented spelling is a companion of early reading". This brings us to another extension of and connection to invented spelling, that is the reading connection. As stated by Uhry and Shepherd (1993, p. 220):

> Advocates of invented spelling theorize that early experiences with writing can lead children into reading. This claim is supported by longitudinal research utilizing LISREL analyses, indicating that spelling is actually a contributor to beginning reading. That is, not only does spelling share some factor with reading, it actually contributes to early reading.

The final stage which starts with invented spelling to produce words and continued with

writing to produce manuscripts is the joy that children get from reading their own stories and books. For these early non-readers and emergently and imminently literate children this is their first opportunity to practice reading. This strategy is well documented to be of significance and importance in the reading instruction of these early readers.

Crafton (1994) has characterized that it is normal development for children to imitate adults by writing down their approximations organizing them into short stories and books. Children will then delight in reading their manuscripts and imitating the more literate actions of adults. These children need to be recognized by adults as authentic readers and writers and encouraged to persist even though their manuscripts are far from adult quality (Crafton, 1994).

Developmental spelling theory presently in its third decade of review has been found to be a key component in learning how to read as noted by several researchers (as cited in Abouzeid, Invernizzi, Bear and Ganske, 1994). This theory differs from the more traditional approach in at least two ways. First it advises a direct assessment of the child's growth as a speller so that their level of word knowledge can be directly matched to their reading and writing. Second, it bases students' instruction on the patterns that exist in words and students' knowledge of these. This instruction is called word study. The key to the proper utilization of this method is the individual child's assessment. Once the teacher knows where the student is on the continuum of developmental stages, the teacher can then proceed to design the strategies and activities to best suit the individual learner (Abouzeid, et all, 1994).

RESEARCH FINDINGS

The whole language approach as a philosophy of literacy acquisition has taken over our nation's schools in a manner which can be likened to the onslaught of the "modern math" craze which struck our country after the Russians launched sputnik. Whole language as a new method came to our shores from Australia and New Zealand. Will whole language stand the test of time or end up like the new math and the USSR?

Literature-based programs have eliminated many of the previously taught individual skills such as phonics, spelling, punctuation, grammar and syntax by teaching these skills as they come up in the literature or as the need arises through the use of mini-lessons. In spelling, students are allowed to spell words as they sound and are taught to write down their best ideas or approximations on how a word is spelled. Thus spellings are invented and children are encouraged to write down their best ideas based on the sounds or phonemes they hear in the words by representing them with letters. Whole language advocates believe that stressing the memorization of word spellings and direct instruction is unnecessary because children will naturally gain in spelling knowledge and expertise through their encounters with correct spellings as they read quality literature. (Uhry and Shepard, 1993).

Opposition to whole language however is starting to organize in the United States. Parent groups in Arizona and California have created public forums on their

dissatisfaction with whole language and invented spelling on the Internet. Other experts believe children learn best if exposed to a combination of methods. Spelling instruction should be both formal and informal. This formal instruction should involve the use of short lists of words that students will encounter in the literature. In this manner, students are prepared for new words they will encounter in text. There is also research proving that students learn words better if they are in lists than encountered embedded in sentences and paragraphs (Store and Willems, 1988).

Although schools are utilizing whole language literature-based programs that encourage invented spelling, perhaps a combination of methods would prove to be the best idea. Uhry and Shepard (1993) found that children who were provided with direct instruction in spelling along with their whole language program, became better decoders. Evidence also points to the integration of informal or whole language spelling approaches as being more successful if they are connected to more formal programs in the entire school. Students learn how to spell in many ways other than the formal spelling lesson and will improve their spelling abilities if encouraged by strategies that involve an integration of the best ideas from different methods of instruction (Storie & Willems, 1988).

SUMMARY AND CONCLUSIONS

Although some schools are utilizing a whole language approach which stresses informal spelling instruction, direct instruction is still in wide use as an instructional

method. Direct instruction in spelling has the advantage of having the longest history and arguably has had the most success. Traditionally, society expected a document from an educated person to be free of misspelled words. Public display of misspelled words in manuscripts is not advocated by some principals and administrators. Some opposition to invented spelling is surfacing and some parent groups are advocating a "back to basics" movement proclaiming the failure of whole language.

Advocates of whole language methodology are, however, opposed to the right or wrong philosophy of direct spelling instruction. Spelling to these zealots, is a process which occurs over a period of time developmentally. Therefore, children's early spellings can be explained through the use of a developmental model. This model has five levels or stages according to Gentry and Gillet (1993) which are: precommunicative, semiphonetic, phonetic, transitional and conventional.

Invented spelling is important to the theory of whole language because it encourages writing. It encourages writing by allowing children to write without the limitations of knowing how to spell every word that they want to use. This also frees the teacher from having to spell words for students during writing time so that children learn not to depend on the teacher to constantly give them the correct answers. Children are encouraged to use their best guesses or approximations of how a word is spelled in their writings. This is a method of instruction which is promoted by Routman (1991) and others. Children, according to whole language theorists, develop their skills as spellers by practicing the spellings of words during their writing. Children test their hypotheses

about word spellings by doing an authentic task instead of writing lists of words or artificial sentences concocted for homework assignments. Whole language theory believes that children will write more if they are interested in the topics of their writing (Wilde, 1990).

There is a natural companion to and benefit from promoting children's early writings by encouraging invented spellings. The advantage of this practice according to holistic educators, is reading. Children naturally want to imitate adults and it is normal for children to write by imitating the adult manuscripts they see every day. And naturally, they have a desire to read their own works. Thus by encouraging reading, invented spelling completes the reading and writing connection that is so important in early education.

Spelling then is seen as a process which evolves from children's early attempts at reading and writing. Spelling is seen as developmental with a natural progression through various stages. And as children read they become better spellers by encountering words in text and noticing their correct spellings. In this way they add to their repertoire of spelling and word knowledge.

By using invented spelling, children are free to experiment with the language. They are allowed to write and read using their own approximations. This is really not any different than the way adults learn by trial and error. For example, when adults take a graduate research course, they have to learn the rules of research writing before the finished manuscript is completed with numerous attempts or approximations along the

way. Or similarly the way some adults, who may not have been good spellers, were freed of the chains of poor spelling ability by modern word processors and computers with spell check software. These conveniences have empowered many to write like never before with the aid of new technology.

The final question, therefore, seems to be one of perfection versus experimentation. Old spelling methods dictated memorization of spelling rules and lists of weekly words. New holistic teaching methods promote the valuing of student's attempts and experimentation with language. Perhaps a combination of both approaches utilizing the best methods from each will demonstrate to be the most beneficial

IMPLICATIONS

There seems to be much controversy in the area of spelling instruction today with the advent of whole language methods. Many still believe in the traditional time-tested methods which have been effective in the past. Many fear that with the advent of all the hand-held spell checkers and computer spelling check programs that students will not have the necessary skills to spell words correctly when they reach adulthood. Modern technology is both making life easier and complicating it more at the same time. Cyberspell is already available on the Internet for those who do not want to be embarrassed by misspelled words in their e-mail. Will developmental spelling stages and the informal teaching of spelling through invented spelling stand the test of time or be like a flash in the pan similar to the "modern math fad" of the past? Only time will tell. In the meantime, more research needs to be done to see if it works.

CHAPTER 3

THE RESULTS

Samples were taken in both classrooms in September and March. These writing samples were evaluated by reading specialists who were trained by Dr. Maraschiello in how to grade children's writing by using the Blackburn Scale which he had developed. The classrooms started out close to the same level of ability in the fall. The invented spelling classroom started out at a 6.87 level average on the Blackburn Scale as determined by the reading specialists. The direct instruction classroom started out at a level of 6.50 average Blackburn level. In the spring the invented spelling classroom had reached an average level of 6.92 and the direct instruction classroom had achieved an average level of 6.58. These results show a positive increase in the writing abilities of both classrooms as measured by the Blackburn Scale. The results show a slightly higher positive increase in the average level in the direct instruction classroom.

When the data is plugged into the t-test for independent samples formula at the .05 level of probability and 30 degrees of freedom (32 samples -2), the calculated value of t is equal to - 0.48. This is accomplished by inputting the change in writing level of each student's individual set of fall and spring writing samples. The required level of t to reject the null hypothesis is equal to 2.04 at the .05 level of probability. Therefore the researcher must accept the null hypothesis and find that there is no significant difference between the two instructional spelling methods. That is, neither method is advantageous

over the other. The students were not harmed by either method of instruction. The positive increase with the direct instruction samples was slightly higher than the increase with the invented spelling samples. The invented spellers, however, started out at a slightly higher level.

The number of scores in group one (the invented spelling classroom) was 19. The sum of scores was 2.00. The mean of this group was 0.11. The sum of the squared scores was 9.00. The sum of squares was 8.79. The standard deviation for the population was 0.68 and the standard deviation for the sample was 0.70.

The number of scores in group two (the direct instruction classroom) was 13. The sum of scores was 3.00. The mean of this group was 0.23. The sum of squared scores was 7.50. The sum of squares was 6.81. The standard deviation for the population was 0.72 and the standard deviation for the sample was 0.75.

CONCLUSIONS

While the t-test for independent samples does not show a significant difference in writing levels of students in the two classrooms using the two different instructional methods, there are some other interesting differences in the samples. For instance, the invented spelling classroom did write more words. The invented spellers started out writing an average of 41 words in the fall. The direct instruction classroom wrote an average of 28 words in the fall. In the spring, the direct instruction students averaged 32

words while the invented spellers averaged 88. The invented spellers did write significantly more words. Does this prove that invented spelling and acknowledging children's approximations at language encourages them to try to write more? Also it could be argued that the invented spellers were enjoying writing more than students who were taught by direct instruction. This can be seen maybe subjectively by the pictures that were drawn by the invented spelling group as compared to the direct instruction group.

NEED FOR FURTHER STUDY

This research focused on only one aspect of analyzing children's writing by looking at the method of instruction. Tenants of whole language suggest that by encouraging invented spelling that students write more, enjoy it more and write at a higher level than students taught by more traditional methods of direct instruction. There is, however, little research to support these claims. This research would seem to indicate that the invented spellers may write longer manuscripts and may enjoy writing more but do not actually write at a significantly higher level when assessed using the Blackburn Writing Scale. Therefore the researcher would recommend that these two other areas of concern be researched. The first is the quantity of writing of invented spellers compared to the quantity of writing of students taught by direct instruction of spelling. The second is whether or not invented spellers enjoyed writing more than students who were taught by direct instruction.

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Appendices

Appendix A

LETTER TO THE SUPERINTENDENT

Date

Superintendent
School District
Somewhere, PA 17000

Dear Dr. _____,

My name is Dale Gill and I am currently enrolled as a graduate student in the Masters in Education in Reading Program at Shippensburg University. As part of my course requirements for Elements of Research, I have designed a research proposal to determine the effectiveness of invented spelling as used in the whole language classroom compared to the traditional method of teaching spelling.

I am requesting your permission to conduct my study in two of your district's elementary schools. Enclosed is a copy of my proposal. If you have any questions regarding this proposal, please call me at (717) 255-2601 (w) or (717) 697-7817 (h). Thank you for your assistance and cooperation in this matter.

Sincerely,

Dale A. Gill

Appendix B

LETTER TO THE PRINCIPALS

Date

Principal
Elementary School
Somewhere, PA 17000

Dear Mr./Mrs. _____,

My name is Dale Gill and I am currently enrolled as a graduate student in the Masters in Education in Reading Program at Shippensburg University. As part of my course requirements for Elements of Research, I have designed a research proposal to determine the effectiveness of invented spelling as used in the whole language classroom compared to the traditional method of teaching spelling.

I am requesting your permission to conduct my study in your elementary school. Enclosed is a copy of my proposal. If you have any questions regarding this proposal, please call me at (717) 255-2601 (w) or (717) 697-7817 (h). Thank you for your assistance and cooperation in this matter.

Sincerely,

Dale A. Gill

Appendix C

LETTER TO THE PARENTS

Date

Parent's name
Address
Somewhere, PA 17000

Dear Mr./Mrs. _____,

My name is Dale Gill and I am currently enrolled as a graduate student in the Masters in Education in Reading Program at Shippensburg University. As part of my course requirements for Elements of Research, I have designed a research proposal to determine the effectiveness of invented spelling as used in the whole language classroom compared to the traditional method of teaching spelling.

I am requesting your permission to conduct my study in two of your district's elementary schools. Enclosed is a copy of my proposal. If you have any questions regarding this proposal, please call me at (717) 255-2601 (w) or (717) 697-7817 (h). Thank you for your assistance and cooperation in this matter.

Sincerely,

Dale A. Gill

Appendix D

Precommunicative	Semiphonetic	Phonetic	Transitional	Conventional
B	BC	BAC		BACK
F	FT	FET	FETE	FEET
S	SP	STAP	STEPE	STEP
J	GK	JOK	JUNCK	JUNK
P	PKN	PEKN	PICING	PICKING
M	ML	MAL	MALE	MAIL
C	SD	SID	SIED	SIDE
H	HN	CHEN		CHIN
J	JS	JRAS	DRES	DRESS
P	PT	PEKT	PEAKED	PEEKED
L	LP	LAP		LAMP
R	RD	ROD	RODE	ROAD

Figure 1.1 Developmental stages in young children's spelling (adapted from Morris, 1992)

Appendix E

Scale of Writing Development
Blackburn Elementary School

Level 11:
- ☐ Child writes a unified paragraph around a topic sentence.
- ☐ Child uses a variety of strategies for revision and editing.
- ☐ Child uses writing techniques to build suspense, create humor, etc.

Level 10:
- ☐ Child willingly revises and edits.
- ☐ Child writes creatively and imaginatively.
- ☐ Child writes original poetry.
- ☐ Child writes clearly. The message makes sense.

Level 9:
- ☐ Writing includes details or dialogue, a sense of humor or other emotions.
- ☐ Child retells a familiar story or follows the pattern of a known story or poem.
- ☐ Spelling becomes more conventional.
- ☐ Child willingly revises.

Level 8:
- ☐ Child writes a short story with a beginning, a middle, and an end.
- ☐ Child writes for several different purposes (narrative, expository, and persuasive).
- ☐ Revision involves adding to the story.
- ☐ Child begins to use punctuation.

Level 7:
- ☐ Child writes the start of a story.
- ☐ Child uses both phonics and sight strategies to spell words.
- ☐ Child writes several short sentences.

Level 6:
- ☐ Child invents spellings.
- ☐ Child writes short sentences following a pattern. (e.g. I love . . .)
- ☐ Story is a single factual statement.
- ☐ The message is understandable.

Level 5:
- ☐ Child uses sentence patterns.
- ☐ Child begins to use spaces between words.
- ☐ Child uses familiar words and invented spelling words to convey a short, simple message.
- ☐ Child uses initial consonants to represent words.
- ☐ Child uses labels for his pictures.
- ☐ Child writes familiar words.

Level 4:
- ☐ Child writes letters in word grouping and can read it back.
- ☐ Child writes letters to convey a message and can read it back.
- ☐ Child dictates one or more sentences, copies it, reads it back, and can still remember it the next day.
- ☐ Child dictates one or more sentences and can read it back.
- ☐ Child dictates one or more sentences and copies it.

Level 3:
- ☐ Copies dictated words.
- ☐ Child copies words he/she sees around the room.
- ☐ Child writes alphabet letter strings.

Level 2:
- ☐ Alphabet letters and mock letters are in a line across the page.
- ☐ Child writes alphabet and mock letters around the page.
- ☐ Child writes mock letters.
- ☐ Child pretends to write.

Level 1:
- ☐ Child draws a picture in response to a prompt and can verbalize about it.
- ☐ Child draws a picture and can talk about his picture.
- ☐ Child draws a picture, but cannot verbalize about picture.
- ☐ Child attempts to write in scribbles or draws patterns.
- ☐ Uncontrolled scribbling.

READ DESCRIPTORS FOR EACH LEVEL FROM BOTTOM TO TOP.

from : (Maraschiello, et al, 1994).

BLACKBURN WRITING SCALE (Revised)

Level 1:

* Child draws a picture to communicate a message.
* Child attempts to write in scribbles or draws patterns.
* Uncontrolled scribbling.

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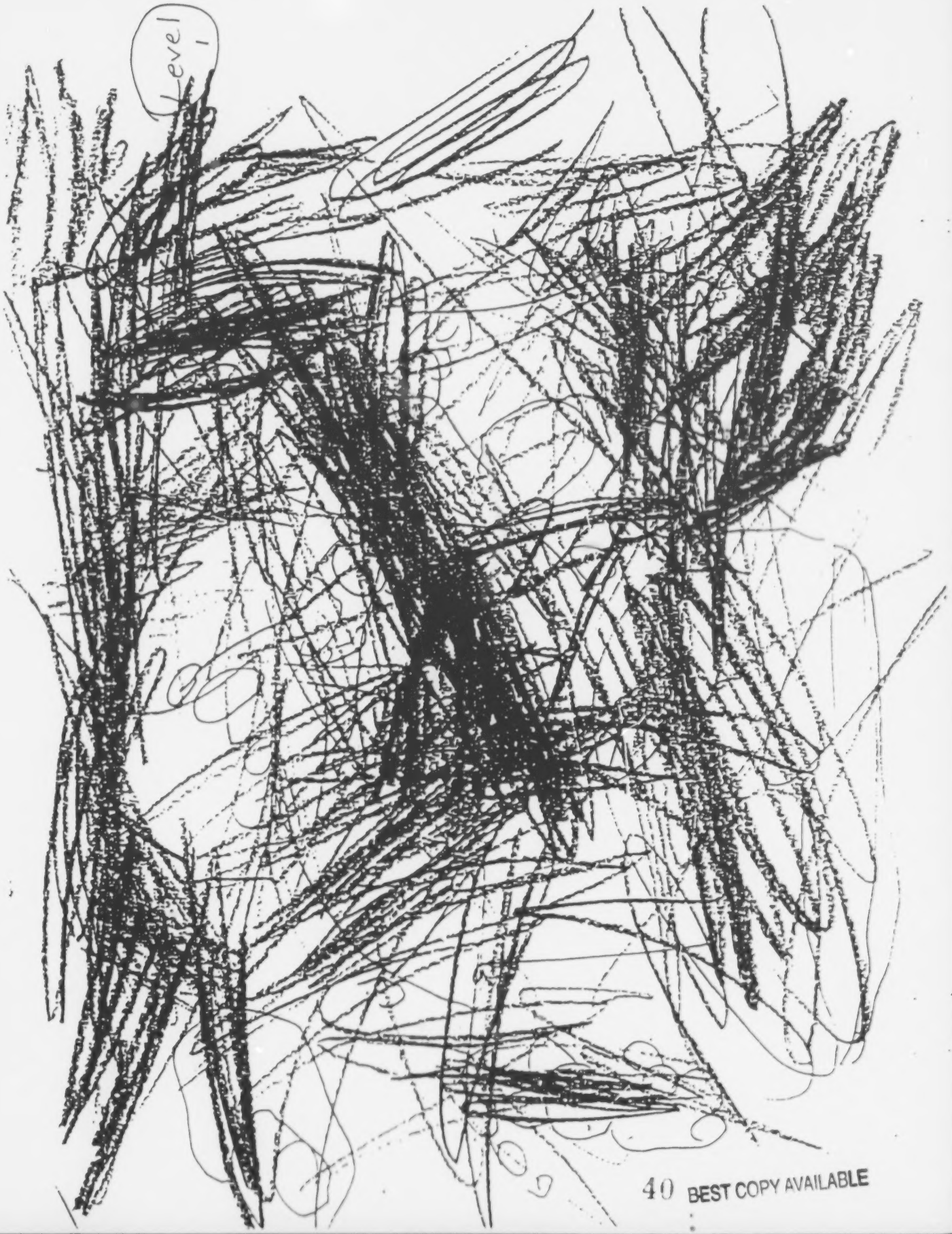

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Level 2:

* Child writes alphabet and mock letters scattered around the page.
* Child writes mock letters.
* Child pretends to write.

Level 2

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Level 3:

* Child copies words he/she sees around the room.
* Copies dictated words.
* Alphabet letters and mock letters are in a line across the page.

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Level 3

Level 3

bat tom bourc' bottle
Cake Calf bought buy'

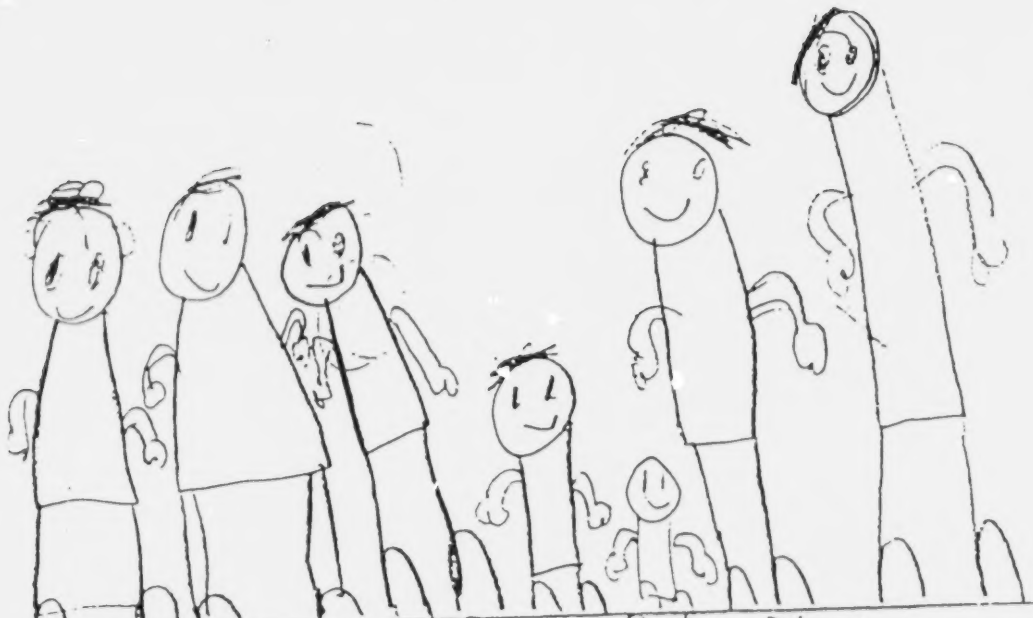
Level 3
so

Level 4:

* Child repeats message.
* Dictates one or more sentences and reads them back.
* Child has a message concept and tells you what the message is.
* Letters don't match sounds.
* Child writes alphabet letter strings.

10/14/93

Level 4



eeDySLT

tseEYKT

teTST

STeeK

SKLLK

tooKyesmm

Level 4.5

ILWUDAD

Yah-ira

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Level 5:

* Child uses initial consonants to represent words.
* Child labels drawings.
* Letters have some connection to sounds.
* Child writes lists.
* Child separates words with a space or marker.
* Child writes a message.
* Child writes familiar words.

/ 2-D1941994

Name Angel Mai Ive

Level 5

W D a P R

We did a picture.

I P W F M M O M

I play with my

P W M S P

I play with my sister

I M L L S D

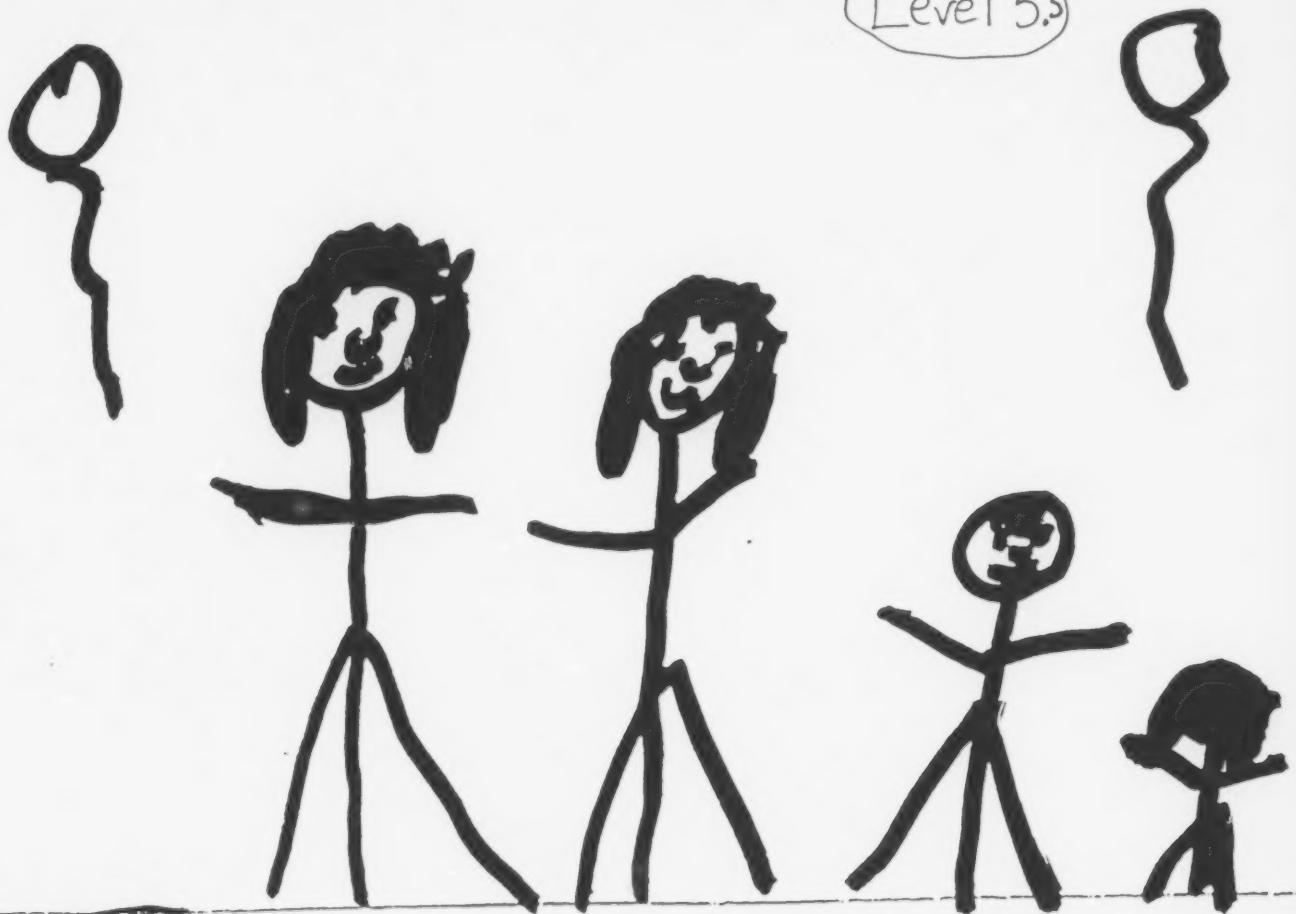
I W V M S M P

I W 2 S P R

I want to go to the park.

Name Jessica V.

Level 5.5



I love my
2nd sis my
und my frie

Level 6:

* Child invents spellings.
* Child writes short sentences following a pattern. (e.g. I love...)
* Story is a single factual statement.
* The message is understandable.

Level 6

1. I Love my Mom.
2. I Love my Grandma
3. I Love my father
4. I Love my ungle
5. I Love my grandfather

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I am special because I love School.

I am special because I love writing

I am special because I learn.

I am special because I help.

I am special because I have a twin sister.

I am special because I have family.

I am special because I can read.

I am special because I had a baby brother

Level 6

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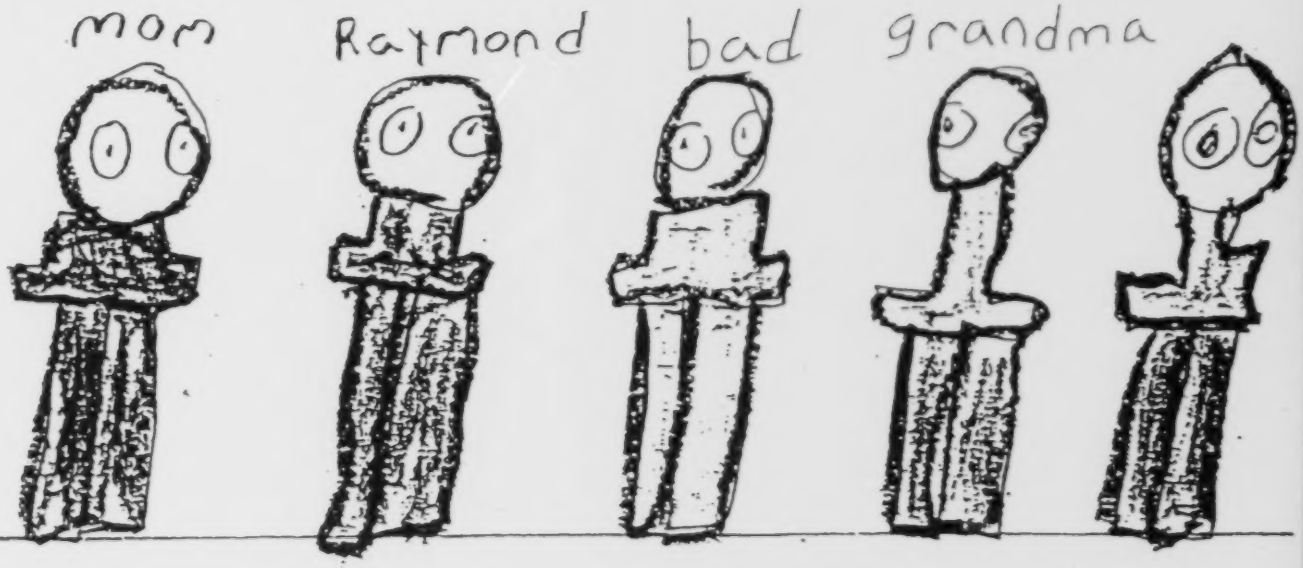
Level 6



My mom is funny

My mom cooky

My mom kiss

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Level 6

I am Y8 b goe Y School.

I Love School.

(Level 8)

Kathleen Tapia Thuesday, February 3rd 1997

My night in Infant.

1- I would feel happy.
2- I feel sc lonely
3- I turn all the music.
4 Be care full of the alarms
5- Turn c. all the lights-
6- I eat all The Food I can
7- I will Receive
8- I call My parents.
9- Try an the sneakers.
10- I am happy because I have a lot of toys.
11- I am sad because I miss My mom.

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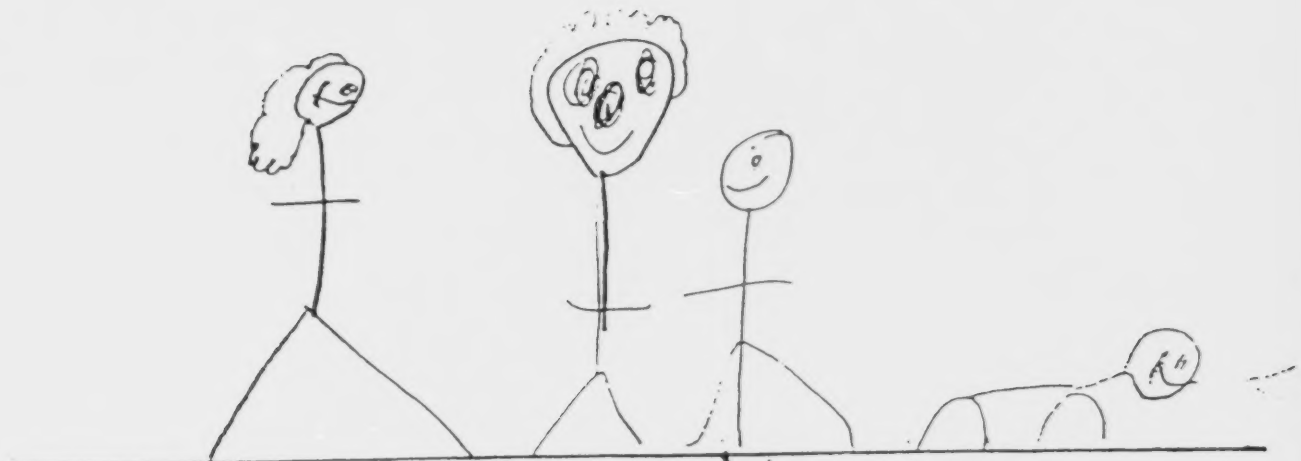
Level 6

Name HENRY Room 210

Feb. 3, 1994



I Love my Mother
I Love my Dad
I Love my bodr.
I Love my SesSdr.

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2 (Level 6)

Name Issac Byrgs

My sis

My cat is red.

My boy is white

My girl is good

My eagle is good

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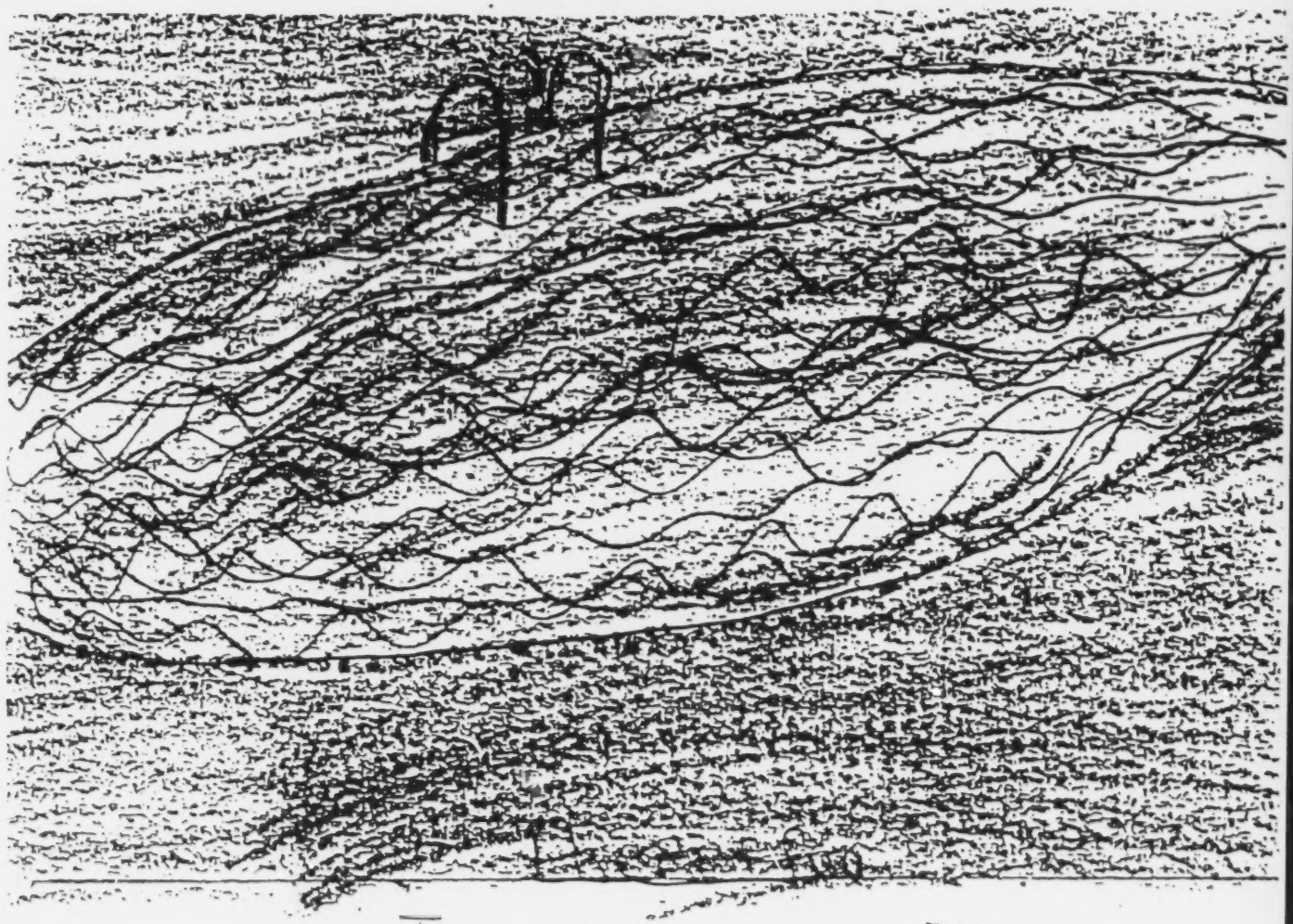
Level 7:

* Child writes the start of a story.
* Child uses both phonics and sight strategies to spell words.
* Child writes several short sentences.



The most fun I ever had was when I wo
Suming wif Mymom and my dad.
My mom nos hal to sum.
I nos hal to sum to.
I had a lat of fun.

Level 7

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Level 7

Oct. 15. 1993

The Most fun I Ever Had

Was.

Going to school becuase I lrin how to Cawnt. and I lrin how to rit nise. and lrin how to reab. and I lrin how to ob math. and lrin how to ob Homewark. and I get to pick prizz.

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Level 8:

* Child writes a short story with a beginning, a middle, and an end.
* Child writes for several different purposes (narrative, expository, and persuasive).
* Revision involves adding to the story.
* Child begins to use punctuation.

Level 8

The Most Fun I ever had was When Me and My Family Went to a Park call Climont in Park because my ant Whanted to go to The Park. So We Went to The Park. And I got on The tunule. With my Sister and My Brother. Then When I Car Out of It My Stumic hurted. after that I got on The logs. Of Water I had a lots Of Fun.

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October. 14, 1993

Level 8

I'm special because I help my mom clean the house. I clean my room. My mom likes when I pass my grades in scool.

I'm special because my mom likes when I do not eat to much candy, and I'm special because I ask my mom if I can go to my friend's house. I go to the store for my mom I like do I like doing good things that what mak me special.

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Level 8 I Am Special Because....

My Mom and Dad love me and I love them tooAnd I am smart and I listen to my rules in school and class. And I pay alltansin to my teacher. I get good grades in school and class. And I do my homework every night and I read a book My family loves me and I love them. They love me so musch And I love them so musch. And I do good on my school work. I don't act silly and foolish. I come to school prepared every day. I nevery have to write punishments. And I am very good in school and class. Sometimes I get good treats form my teacher. I nevery stay after school. When I come in to class I am ready to wrok. I like to make new friend. My teacher says I am good every day. I nevery stayed in the conner cause I am very, very good.

October 15, 1993

Level 8

The most fun I ever had is when I was a little baby and I use to thow baby foo no my mom and dad. And I rember When I use to stane my baby brother no his head. And I rember When I was a little baby and my dad use to ticle me so much that my moth woted to come out. And my dad still ticles me but this time my dad ticles my tows.

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Level 9:

* Writing includes details or dialogue, a sense of humor or other emotions.
* Child retells a familiar story or follows the pattern of a known story or poem.
* Spelling becomes more conventional.
* Child willingly revises.

Level 9

October 18, 1993

A Fascinating Person In My Family

A fascinating person in my family is my grandpa. His name is [illegible]. He is special to me because he is paralyzed. That's why I love him so much. He love me so much too. The first time he came out of the hospital I was so happy that I stayed over his house. When I went to see him, he was sick. He had two go to the hospital. I was really sad. My mom, dad, sister and brother were sorry. We felt so sad for him. and rite now he is at the hospital.

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Level 9 Final Draft

My cousin Mother and fathe
left my cousin with my mom
And every day when I wake up
my cousin says lets play.
I play with her she tells
me she want to play rope so
I play with her then she
tells me she don't want to
play rope no more. Then she tell
me she want to play barbie
so I play with her then in
a fead minutes she tells me
she saids she do not want to
play no more. Then she tells
me she want to play sollor
statting I tell her gril make
your disicion then she tells
me she want to play sollor
statting so we play. And everry
dare she do this to me. She drive

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me nuts doing that to me.
And a fead minutes she said
to me she want to play nint
do. And I scream real loud. And
I can not want until her
mom and father come back.

(N) pg. 2

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Level 10:

* Child willingly revises and edits.
* Child writes creatively and imaginatively.
* Child writes original poetry.
* Child writes clearly. The message makes sense.

V
3rd
copy

January 31, 1994 Level 10 Darryl Irizarry
grade 3

My Night in Toy's u Rs

If I was locked in toy's u Rs.
I would play and have lot's of fun.
I would play with the toys they have there!
me and my sister can play sega or play
Hide N go seek!
We would proubly call home but I can handle
it.
we would play cowboys and indians together
we can run and ride bikes at the store.
we could read books and tell math Problems.
we could play foot ball.
me and my sister would play. me and my sister
can make mobes.
At last it is monday = hope they opean
up.

me and my sister made a tent to go to sl-
in.
I herd they do not opean on weekends.
This is not my lucky day.
If i tell my sister she will be real scared.
I need to call fll Fast.
we Proubley half to go to Sleep over night.
I've Just chilled my mom.
She said to stay Come

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we have not ate for 1 day.
I'll just go back to sleep.
I've woke up real fast.
I told my sister did she herd that she said yes.
at last they opean the doors.
The police were there.
I said "daddy mommy"!

I hued them and kiss them

The End

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BLACKBURN WRITING SCALE (Revised)

Level 11:

* Child writes a unified paragraph around a topic sentence.
* Child uses a variety of strategies for revision and editing.
* Child uses writing techniques to build suspense, creating humor, etc.

(Level 11)

Krystal
Gr. 4
306

Feb 3, 1994

Lawson Person

My name is Nancy Kerrigan, I am very apt in ice skating. I dream of winning the gold medal in ice skating. Skating is the best thing that has ever happened to me. I tried and tried when I was a little child to get where I am now. I get very nervous when I skate in front of people.

One day I was skating and somebody ran up on me and hit me in the leg with a metal pipe. I fell down and started crying but when I found out that Tonya Harding was involved I extremely got mad now I take therapy I am going on with my life and skating. I think I can still get that gold medal. I'm just psyched on going to get that gold medal. When I got hurt thoughts where flashing in my mind. Am I still going to skate again? Am I going to die? Now that I am well the ordeal is still lingers on.

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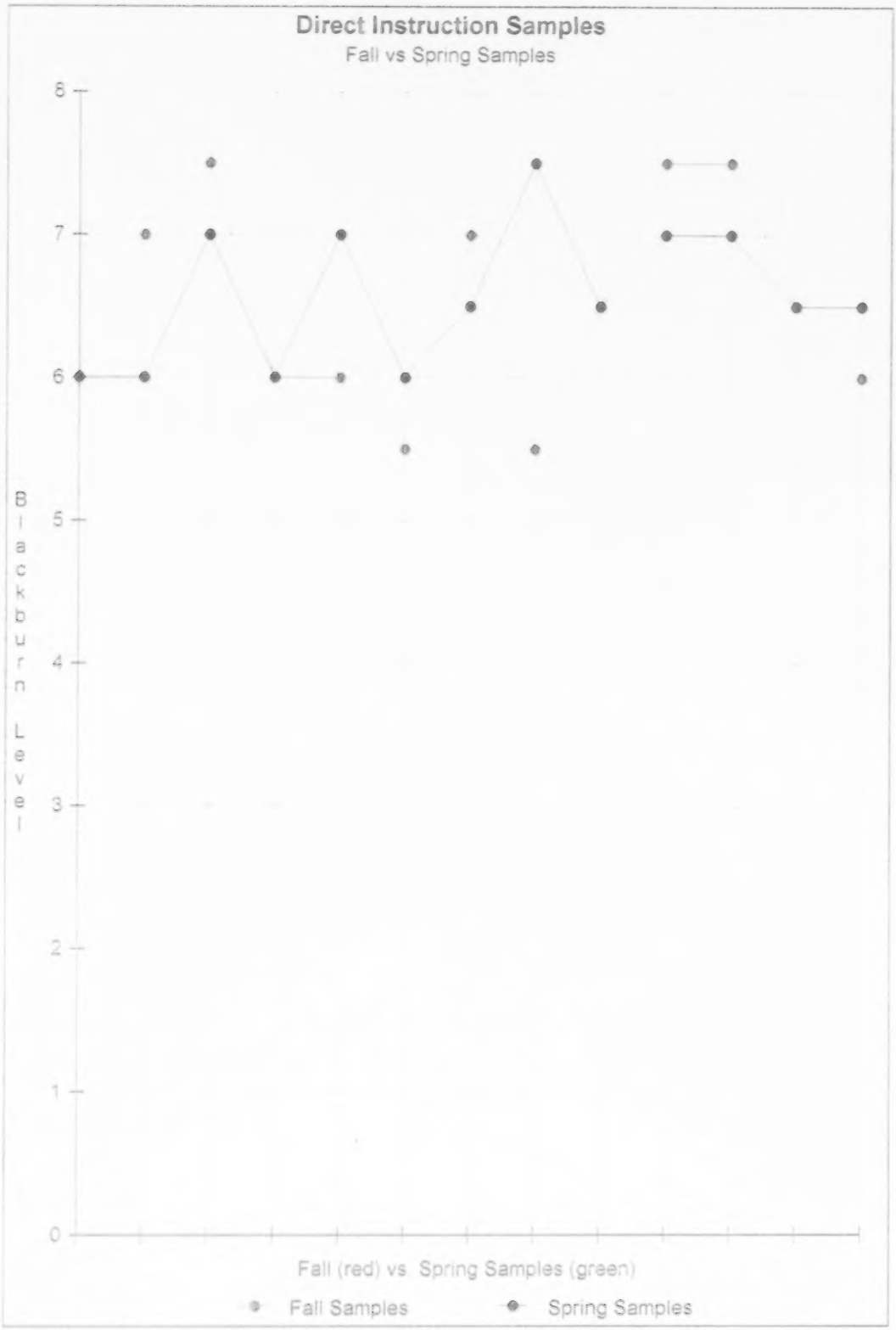
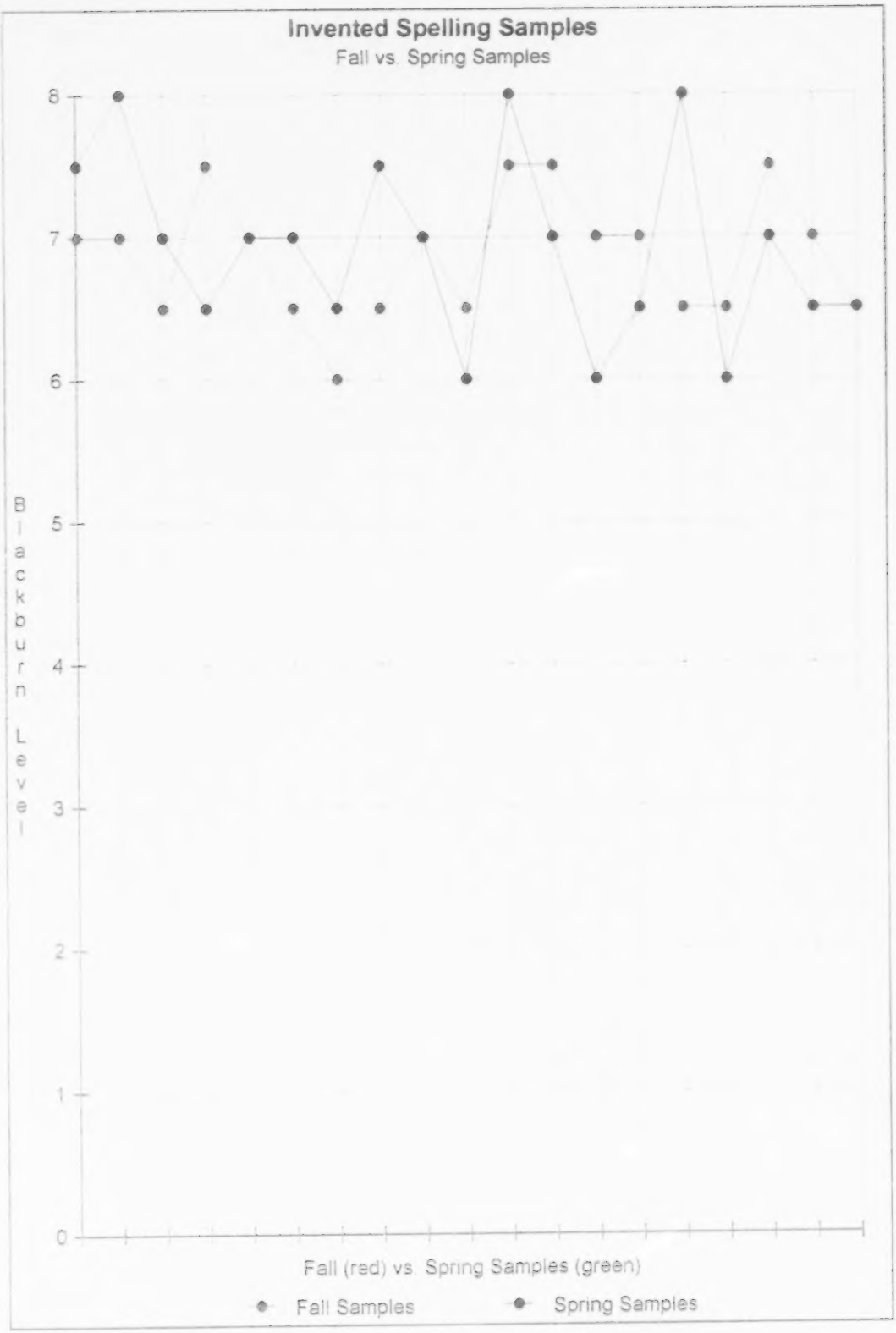
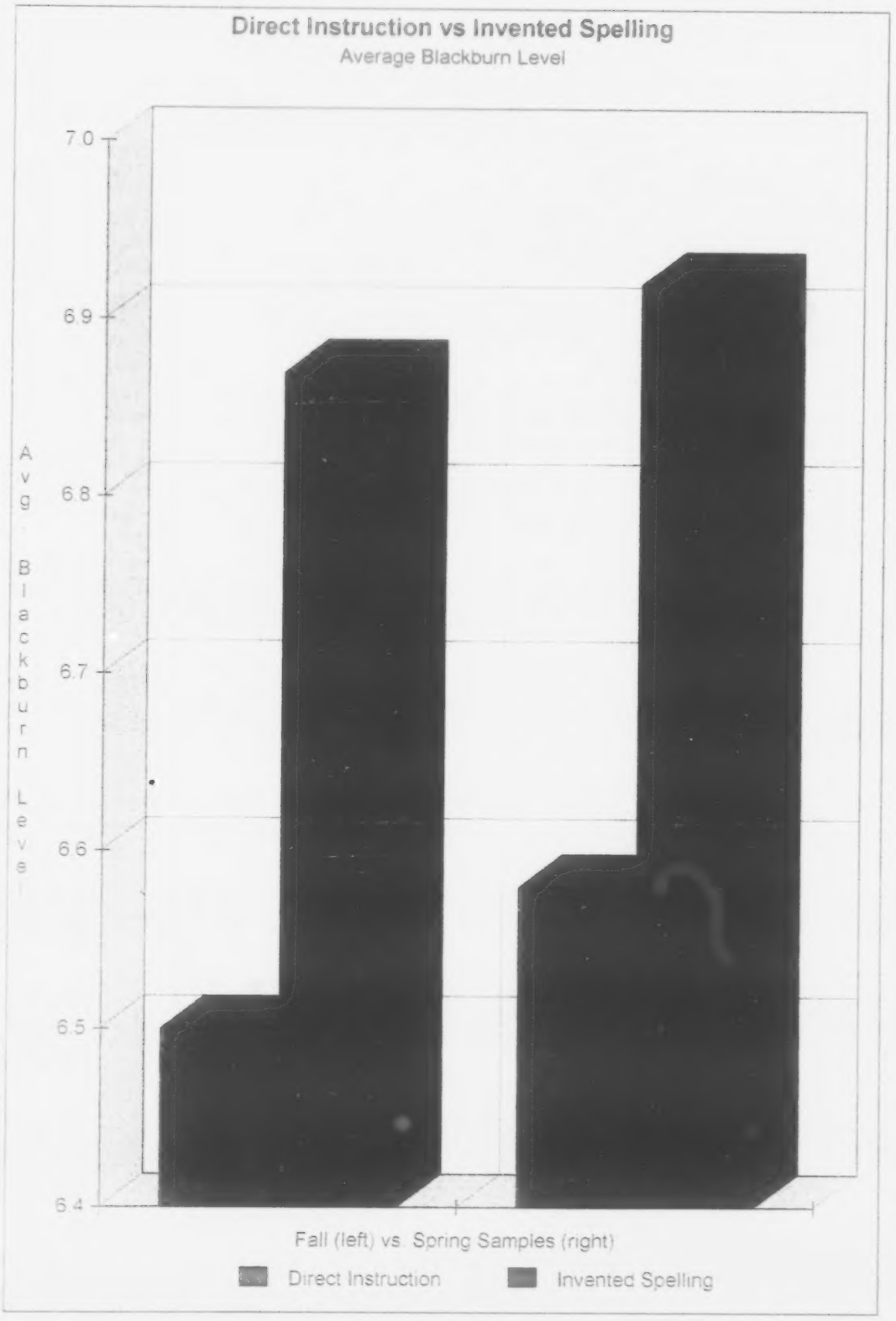
Standard Deviation For Samples & Populations	
Statistic	**Value**
Number of scores (N)	13
Sum of scores (Σ N)	3.00
Mean ($\overline{X}$)	0.23
Sum of squared scores (ΣX^2)	7.50
Sum of squares (SS)	6.81
Standard deviation for a population	0.72
Standard deviation for a sample	0.75

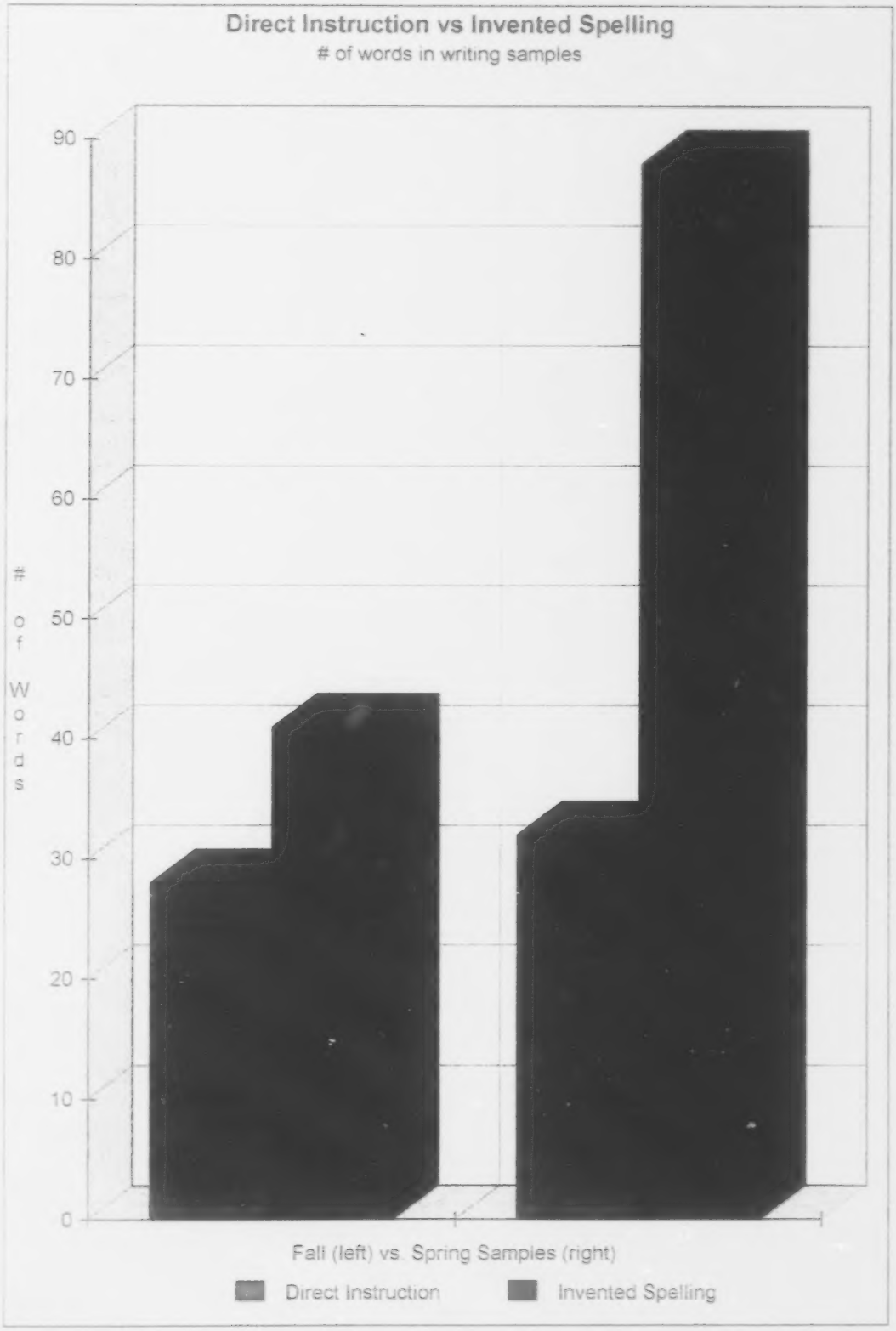

Direct Instruction Samples
Fall vs Spring Samples
Blackburn Level
8
7
6
5
4
3
2
1
0
Fall (red) vs. Spring Samples (green)
Fall Samples
Spring Samples

Standard Deviation For Samples & Populations	
Statistic	**Value**
Number of scores (N)	19
Sum of scores (Σ N)	2.00
Mean ($\overline{X}$)	0.11
Sum of squared scores (ΣX^2)	9.00
Sum of squares (SS)	8.79
Standard deviation for a population	0.68
Standard deviation for a sample	0.70


Invented Spelling Samples
Fall vs. Spring Samples
8
7
6
5
4
3
2
1
0
Blackburn Level
Fall (red) vs. Spring Samples (green)
Fall Samples
Spring Samples

t-Test for Independent Samples	
Statistic	**Value**
Number of scores in group one	19
Sum of scores in group one	2.00
Mean of group one	0.11
Sum of squared scores in group one	9.00
SS of group one	8.79
Number of scores in group two	13
Sum of scores in group two	3.00
Mean of group two	0.23
Sum of squared scores in group two	7.50
SS of group two	6.81
t-Value	-0.48
Degrees of freedom (df)	30


Direct Instruction vs Invented Spelling
Average Blackburn Level
7.0
6.9
6.8
6.7
6.6
6.5
6.4
Avg. Blackburn Level
Fall (left) vs. Spring Samples (right)
Direct Instruction
Invented Spelling


Direct Instruction vs Invented Spelling
# of words in writing samples
90
80
70
60
50
40
30
20
10
0
# of Words
Fall (left) vs. Spring Samples (right)
Direct Instruction
Invented Spelling